



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/787,172

02/27/2004

Shin-ichi Uehara

Q80096

4907

23373 7590 08/10/2009
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

FINEMAN, LEE A

ART UNIT

PAPER NUMBER

2872

MAIL DATE

DELIVERY MODE

08/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/787,172	Applicant(s) UEHARA ET AL.	
	Examiner LEE FINEMAN	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 15, 16, 45 and 48-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 15, 16, 45 and 48-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to an amendment filed 4 May 2009 in which claims 1, 4 and 48-51 were amended. Claims 1-5, 15-16, 45 and 48-51 are pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-5, 15-16, 45 and 48-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has amended all independent claims to include the limitation “wherein the adhesive layer/means for fixing affixes the optical unit directly on the image surface of the display panel such that a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display panel is maintained while permitting a difference in expansion or contraction between the optical unit and the display panel so as to permit displacement of the optical unit due to expansion and contraction of a material of the optical unit.” Applicant further states that the specification of the instant application discloses precise alignment of the display panel and the optical unit to which the examiner agrees. However, the specification lacks any details to the positional relationship of any specific regions of the optical unit and the display AFTER expansion or contraction as

Art Unit: 2872

claimed. In fact, the paragraph spanning pages 27 and 28 of the specification discusses performing alignment expansion or contraction using markers 21 and 31. Therefore the specification fails to specifically identify maintaining a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display panel while permitting a difference in expansion or contraction between the optical unit and the display panel. The applicant is now relying on this limitation as criticalness to the patentability. As such, the examiner contends, absent specific support in the specification, that this subject matter was not considered within the metes and bounds of the invention as originally filed. The dependent claims inherit the deficiencies of the claim from which they depend.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 15, 45 and 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai, US 5,930,037 in view of Takahashi et al., US 4,921,330 (henceforth Takahashi).

Regarding claims 1 and 48-51, Imai discloses in fig. 3 an image display device (101) comprising: a display panel (102) which has a plurality of pixel sections (L, R) each of which includes at least a pixel displaying an image for the first viewpoint (L) and a pixel displaying an image for the second viewpoint (R), said pixel sections being provided periodically in one direction (fig. 3), and said display panel comprising an image surface on which the plurality of

Art Unit: 2872

pixels are displayed (fig. 3); an optical unit/optical screen/optical sheet/lens film (103) which refracts the light emitted from said pixels and emits the light in directions different from each other (fig. 3), and an adhesive layer/means (column 5, lines 39-42) affixes the optical unit/optical screen/optical sheet/lens film (103) directly on the image surface of the display panel on which the plurality of pixels are displayed (fig. 3) which is provided on said display panel (103) to fix the optical unit/optical screen/optical sheet/lens film and the display panel in line (column 5, lines 39-44), wherein the display panel (102) and optical unit/optical screen/optical sheet/lens film (103) are aligned so that light emitted from the pixel displaying an image for the first view point is refracted and emitted by a specific region of the optical unit to arrive at said first view point. Imai discloses the claimed invention except for explicitly stating wherein the adhesive layer is provided on a part of an area enclosing an image display area of said display panel and provided to install the optical unit/optical screen/optical sheet/lens film on the display panel such that a positional relationship between a specific area of the optical unit/optical screen/optical sheet/lens film and the pixel displaying an image for the first view point of the display panel is maintained while permitting a difference in expansion or contraction between the optical unit/optical screen/optical sheet/lens film and the display panel; or the means for fixing the optical unit directly on the image surface of the display panel such that an unfixed part between the optical unit and the display panel may be deformed to absorb stress while a positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display panel is maintained. Takahashi teaches in figs. 1 and 2, providing an adhesive layer/means for fixing (7) an optical unit/optical screen/optical sheet/lens film (3) directly to a panel (2) such that a positional relationship between a specific region of the

Art Unit: 2872

optical screen/optical sheet/lens film and the device is maintained while permitting a difference in expansion or contraction between the optical screen/optical sheet/lens film and panel (see column 4, line 60-column 6, line 15, in at least the same way as the instant invention since it is the same adhesive, i.e., the double-side tape) and such that an unfixed part (bottom of screen S) between the optical unit and the panel may be deformed to absorb stress (see column 4, line 60-column 6, line 15) while a positional relationship between the specific region of the optical unit and the display panel is maintained (in at least the same way as the instant invention since it is the same adhesive, i.e., the double-side tape). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adhesive layer as taught by Takahashi between the optical screen/optical sheet/lens film and display panel of Imai to avoid undulation and swelling between the system elements (Takahashi, column 3, lines 39-42). It is noted that the when using the positional relationship as taught by Takahashi the adhesive layer/means would be provided on a part of an area enclosing an image display area of said display panel.

Regarding claim 45, Imai in view of Takahashi further discloses wherein the adhesive layer is provided along at least two sides of the optical unit (see Takahashi column 2, lines 5-8).

3. Claims 2-3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai in view of Takahashi as applied to claim 1 above and further in view of Snaper, US 4,140,370.

Regarding claims 2-3 and 15, Imai in view of Takahashi further discloses wherein said optical unit is a lenticular lens (Imai, 103) having a plurality of semicylindrical lenses (Imai, fig. 3), longitudinal direction of which is perpendicular to said one direction (fig. 3), and said adhesive layer (7, Takahashi) is provided along the side extending in a longitudinal direction of

Art Unit: 2872

said semicylindrical lens in said optical unit and along the side extending in a direction orthogonal to the longitudinal direction of said semicylindrical lens in said optical unit. Imai in view of Takahashi disclose the claimed invention except for a frame. Snaper teaches in fig. 14 use of a frame (68) surrounding an optical unit (66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a frame as taught by Snaper to the optical unit of Imai in view of Takahashi to protect the edges of the unit.

4. Claims 4, 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai in view of Takahashi as applied to claim 1 above and further in view of Eichenlaub, US 5,410,345.

Imai in view of Takahashi as applied to claim 1 above discloses the claimed invention except wherein the optical unit is a fly-eye lens having a plurality of convex lenses in which a lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other. Eichenlaub teaches in fig. 13 that fly-eye lenses (178) with the lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other are a well known lens array in the stereoscopic art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a fly-eye lens with the lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other as taught by Eichenlaub in the system of Imai in view of Takahashi as they are commonly available and easy to obtain type of lens array. Therefore, said adhesive layer is provided both along the side orthogonal to the short side of said optical unit and along a short side of said optical unit.

Response to Arguments

5. Applicant's arguments filed 4 May 2009 have been fully considered but they are not persuasive.

Applicant argues that Imai and Takahashi do not maintain the positional relationship between the specific region of the optical unit and the pixel displaying an image for the first view point of the display panel while permitting a difference in expansion or contraction between the optical unit and the display panel so as to permit displacement of the optical unit due to expansion and contraction of a material of the optical unit. The examiner respectfully disagrees and points out first that the specification of the instant invention does not specifically disclose maintaining a specific positional relationship for a specific region of the optical unit and the pixel displaying an image for the first view point of the display panel after displacement. Secondly, as stated in the rejection, since the adhesive layer of Takahashi is the same as the instant invention, i.e., double sided tape, it will work in the same way and maintain the specific positional relationship for a specific region in the same way as the instant invention.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 2872

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE FINEMAN whose telephone number is (571)272-2313. The examiner can normally be reached on Monday - Friday 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lee Fineman/
Primary Examiner, Art Unit 2872
7 August 2009